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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/844,693	04/26/2001	David W.J. Stringer-Calvert	SRI/4285-2	3289

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EXAMINER	
PATEL, NIKETA I	
ART UNIT	**PAPER NUMBER**
2181	

DATE MAILED: 04/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/844,693	STRINGER-CALVERT ET AL.	
	Examiner	Art Unit	
	Niketa I. Patel	2181	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 February 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6,8-23,25-40 and 42-51* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,8-23,25-40 and 42-51* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 June 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Supervisory FRITZ FLEMING PRIMARY EXAMINER GROUP 2100 4/14/2006

AU 2181

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☒ Interview Summary (PTO-413) Paper No(s)/Mail Date. *2/14/06* .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02/16/2006 has been entered.

Specification

2. The disclosure is objected to because of the following informalities:

a. The application listed on page 9 is missing the serial number. Applicant is requested to provide the serial number of the application listed on the page 9 and update the status of the application. Appropriate correction is required.

b. Page 12 contains an embedded hyperlink and/or other form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-6, 8-23, 25-40 and 42-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bots et al. U.S. Patent Number: 6,226,748 B1 (hereinafter referred to as "*Bots*") and further in view of Pandya et al. U.S. Patent Number: 6,671,724 B1 (hereinafter referred to as "*Pandya*".)

5. **Referring to claims 1, 18, 35,** *Bots* teaches a group management system comprising: a plurality of interconnected nodes [see figure 2 – elements 201-203, 211-213, 221-223, 331-332] communicatively coupled with each other as member nodes of a virtual private network ("VPN") [see figure 2 – element 'VPNU' and column 2 – lines 36-67 and column 3, lines 1-7] wherein all communications between said interconnected nodes are encrypted [see column 6, lines 37-41, a data packet between source and destination addresses that are both members of the same VPN group is encrypted]; and a plurality of master nodes [see figure 2 – element 'VPNU'], each of the master nodes controlling membership in the VPN for an associated non-empty subset of the member nodes [see column 3 – lines 8-22] and further facilitating said communications between said plurality of interconnected nodes [see column 6 – lines 37-52.] *Bots* does not set forth the limitation of wherein in the event one of the master nodes fails, the associated subset of member nodes will be automatically reassigned to one or more other of the master nodes however, *Pandya* teaches this limitation [see *Pandya* column 7, lines 11-57, 'one or more back up control points that will assume primary control'] in order to avoid catastrophic network failure.

One of ordinary skill in the art at the time of applicant's invention would have clearly recognized that it is quite advantageous for the system of *Bots* to have a backup master node that will assume control in an event of primary master node's failure, in order to avoid catastrophic

network failure. It is for this reason that one of ordinary skill in the art would have been motivated to implement *Bots's* system with a backup master node in order to avoid catastrophic network failure.

6. **Referring to claims 2, 19, 36**, teachings of *Bots* as modified by the teachings of *Pandya* above, teaches the system wherein a membership change in at least one of the subsets can be performed without notifying all of the master nodes not associated with the changed subset **[**see *Bots* column 2 – lines 36-67 and column 3, lines 1-7.**]**

7. **Referring to claims 3,20, 37**, teachings of *Bots* as modified by the teachings of *Pandya* above, teaches the system wherein at least two of the subsets do not share any member nodes in common [see *Bots* figure 2 – elements 201-203, 211-213, 221-223, 331-332.]

8. **Referring to claims 4, 21, 38**, teachings of *Bots* as modified by the teachings of *Pandya* above, teaches a group management system however fails to set forth the limitation of the system wherein at least two of the subsets share at least one member node in common. *Pandya* teaches the above stated limitations **[**see column 7 – lines 3-39; column 6 – lines 39-59.**]** One of ordinary skill in the art at the time of applicant's invention would have clearly recognized that it is quite advantageous for the system of *Bots* to have at least two of subsets share at least one member node in common in order to provide an alternate routing path. It is for this reason that one or ordinary skill in the art would have been motivated to implement *Bots's* system with at least two of subsets share at least one member node in common in order to provide an alternate routing path.

9. **Referring to claims 5, 22, 39**, teachings of *Bots* as modified by the teachings of *Pandya* above, teaches the system wherein a communication involving said common member node can be transmitted along multiple paths [see *Pandya* column 7 – lines 3-39; column 6 – lines 39-59.]

10. **Referring to claims 6, 23, 40**, *Bots* teaches the system further comprising an intrusion detection mechanism that receives said multiple-path communication as input [see *Pandya* column 7 – lines 3-39; column 6 – lines 39-59.]

11. **Referring to claims 8, 25, 42**, teachings of *Bots* as modified by the teachings of *Pandya* above, teaches the system wherein each of the member nodes is associated with at least one of the master nodes as a back-up master [see column 7 – lines 3-39; column 6 – lines 39-59.]

12. **Referring to claims 9, 26, 43**, teachings of *Bots* as modified by the teachings of *Pandya* above, teaches the system wherein the plurality of interconnected nodes are communicatively coupled as part of a peer-to-peer network [see *Pandya* column 6 – lines 26-35; column 10 – lines 12-15.]

13. **Referring to claims 10, 27, 44**, teachings of *Bots* as modified by the teachings of *Pandya* above, teaches the system wherein the plurality of master nodes are part of an edge-based content delivery network [see *Pandya* column 6 – lines 26-35.]

14. **Referring to claims 11, 28, 45**, teachings of *Bots* as modified by the teachings of *Pandya* above, teaches the system wherein the member nodes are allocated to the subsets at least partly based upon one or more criteria of connectivity between each of the member nodes and the corresponding master nodes [see *Pandya* column 4 – lines 22-46; column 6 – lines 26-35.]

15. **Referring to claims 12, 29, 46**, teachings of *Bots* as modified by the teachings of *Pandya* above, teaches the system wherein the connectivity criteria are selected from a group of criteria

comprising geographical distance, topological distance, bandwidth, latency, jitter, financial cost, and political boundaries [see *Pandya* column 8 – lines 47-67; column 9 – lines 1-13.]

16. **Referring to claims 13, 30, 47,** teachings of *Bots* as modified by the teachings of *Pandya* above, teaches the system wherein at least one of the master nodes further controls membership in another virtual overlay group different from the VPN [see *Pandya* column 7 – lines 3-39; column 6 – lines 39-59.]

17. **Referring to claims 14, 31, 48,** teachings of *Bots* as modified by the teachings of *Pandya* above, teaches the system of wherein an encryption key is used for communication [see *Pandya* column 9 – lines 50-65; column 10 – lines 52-65] however, does not set forth the limitation of the system of wherein a communication from a first one of the subsets of the member nodes uses a first encryption key, and a communication from a second one of the subsets uses a second encryption key that is different from the first encryption key. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention that it was old and well known in the computer networking art to get the advantage of secure data transmission by providing each unit/subset with it's own encryption key. It would have been obvious to one or ordinary skill in the art at the time of applicant's invention to use two separate encryption keys for both of the subsets, to get this advantage.

18. **Referring to claims 15, 32, 49,** teachings of *Bots* as modified by the teachings of *Pandya* above, teaches the system of wherein an encryption key is used for communication [see *Pandya* column 9 – lines 50-65; column 10 – lines 52-65] however, does not set forth the limitation of the system wherein one or more of the master nodes are operable to translate between the encryption keys. It would have been obvious to one of ordinary skill in the art at the time of

applicant's invention that it was old and well known in the computer networking art to get the advantage of allowing devices connected to two different subsets to communicate with each other by providing a master node with an encryption key translator. It would have been obvious to one or ordinary skill in the art at the time of applicant's invention to use encryption key translator to get this advantage.

19. **Referring to claims 16, 33, 50,** teachings of *Bots* as modified by the teachings of *Pandya* above, teaches the system of wherein an encryption key is used for communication [see *Pandya* column 9 – lines 50-65; column 10 – lines 52-65] however, does not set forth the limitation of the system wherein a communication from a first one of the subsets of the member nodes and a communication from a second one of the subsets of the member nodes both use the same encryption key. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention that it was old and well known in the computer networking art to get the advantage of saving resources by using same encryption key to communicate with a device that is being shared between two different subsets of the member nodes. It would have been obvious to one or ordinary skill in the art at the time of applicant's invention to use same encryption key to get this advantage.

20. **Referring to claims 17, 34, 51,** teachings of *Bots* as modified by the teachings of *Pandya* above, teaches the system wherein at least one of the master nodes are operable to remotely install software communication mechanisms for a new member node of the VPN without the necessity of installing augmented hardware for the new member node [see *Pandya* column 4 – lines 30-61; column 6 – lines 60-67; column 7 – lines 1-10.]

Response to Arguments

21. Applicant's arguments filed 08/18/2005 have been fully considered but they are not persuasive. The applicant argues that *Bots* fails to teach the limitation of the master node facilitating the communication between the plurality of interconnected nodes at pages 10-14 of the 'Remarks' section.

The examiner respectfully disagrees with this argument.

Bots teaches that the master node facilitates the communication between the plurality of interconnected nodes [see column 6 – lines 37-52, VPNU facilitates the communication between the member nodes.]

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Niketa I. Patel whose telephone number is (571) 272 4156. The examiner can normally be reached on M-F 8:00 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fritz Fleming can be reached on (571) 272 4145. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Supervisory

FRITZ FLEMING
PRIMARY EXAMINER
GROUP 2100
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4/14/2006

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NP
04/14/2006